

WHAT IS CLAIMED IS:

1. A method for forming a stator structure comprising the steps of:
 - (a) forming a first part having a first middle portion with a through hole, and M pieces of extending portions extending from said first middle portion;
 - (b) forming a second part having a second middle portion with a through hole, and N pieces of extending portions extending from said second middle portion;
 - (c) alternately bending said M pieces of extending portions of said first part toward a first direction and alternately bending said N pieces of extending portions of said second part toward a second direction opposite to said first direction, respectively; and
 - (d) correspondingly combining said first and second parts together to form said stator structure in which said bent extending portions of said first and second parts constitute a columnar portion of said stator structure for winding a coil thereon;
wherein M and N are even numbers not less than four, respectively.
2. The method according to claim 1 wherein said first and second parts are integrally formed by a magnetically conductive material,
respectively.
3. The method according to claim 2 wherein said magnetically conductive material is silicon steel.
4. The method according to claim 1 wherein each of said extending portions of said first and second parts is a rectangular sheet.
- 25 5. The method according to claim 1 wherein each of said extending portions of said first and second parts is an arcuated sheet.

6. The method according to claim 5 wherein said first middle portion of said first part is a ring which is connected with said each arcuated sheet of said first part through a narrowed connective portion, and said second middle portion of said second part is a ring which is connected with said each arcuated sheet of said second part through a narrowed connective portion.

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7. The method according to claim 1 wherein after said step (d), said method further includes a step (e) of coating said columnar portion of said stator structure with an insulating material.

10 8. The method according to claim 7 wherein said insulating material is an insulating tape.

9. The method according to claim 7 wherein after said step (e), said method further includes a step (f) of respectively bending residually unbent extending portions of said first and second parts toward said 15 columnar portion for wrapping said coil in said stator structure.

10. The method according to claim 1 wherein residually unbent extending portions of said first and second parts are arcuated sidewall structures such that said coil is wrapped in said stator structure by said arcuated sidewall structures of said first and second parts when said coil is wound on said columnar portion and said first and second parts are correspondingly combinated together.

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11. The method according to claim 10 wherein said coil is a self-adhesive coil.

12. A stator structure comprising:

25 a first part having a first middle portion with a through hole, and M pieces of extending portions extending from said first middle portion;

a second part having a second middle portion with a through hole, and N pieces of extending portions extending from said second middle portion;

wherein said M pieces of extending portions of said first part are
5 alternately bent toward a first direction and said N pieces of extending portions of said second part are alternately bent toward a second direction opposite to said first direction, respectively, to constitute a columnar portion of said stator structure for winding a coil thereon when said first and second parts are correspondingly combined together;

10 where M and N are even numbers not less than four, respectively.

13. The stator structure according to claim 12 wherein said first and second parts are integrally formed by a magnetically conductive material, respectively.

14. The stator structure according to claim 13 wherein said magnetically 15 conductive material is silicon steel.

15. The stator structure according to claim 12 wherein each of said extending portions of said first and second parts is a rectangular sheet.

16. The stator structure according to claim 12 wherein each of said extending portions of said first and second parts is an arcuated sheet.

20 17. The stator structure according to claim 16 wherein said first middle portion of said first part is a ring which is connected with said each arcuated sheet of said first part through a narrowed connective portion, and said second middle portion of said second part is a ring which is connected with said each arcuated sheet of said second part through a narrowed connective portion.
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18. The stator structure according to claim 12 wherein residually unbent extending portions of said first and second parts are arcuated sidewall

structures such that said coil is wrapped in said stator structure by said arcuated sidewall structures of said first and second parts when said coil is wound on said columnar portion and said first and second parts are correspondingly combined together.

5 19. The stator structure according to claim 18 wherein said coil is a self-adhesive coil.

20. The stator structure according to claim 12 wherein residually unbent extending portions of said first and second parts are bent toward said columnar portion for wrapping said coil in said stator structure.

10 21. A stator comprising:

a first part having a first middle portion with a through hole, and M pieces of extending portions extending from said first middle portion;

15 a second part having a second middle portion with a through hole, and N pieces of extending portions extending from said second middle portion;

wherein said M pieces of extending portions of said first part are alternately bent toward a first direction and said N pieces of extending portions of said second part are alternately bent toward a second direction opposite to said first direction, respectively, to constitute a 20 columnar portion of said stator when said first and second parts are correspondingly combined together, where M and N are even numbers not less than four, respectively;

25 a coil wound around said columnar portion and wrapped in said first and second parts when said residually unbent extending portions of said first and second parts are bent toward said columnar portion; and

an insulator sheathed on said columnar portion for prohibiting the contact of said coil with said columnar portion.

22. A stator according to claim 21 wherein said insulator is an insulating tape.